Claims:

1. Use of a compound comprising the following amino acid sequence

$$X_1X_2X_3X_4X_5X_6,$$

wherein X_1 is an amino acid, except of C,
X_2 is an amino acid, except of C,
X_3 is an amino acid, except of C,
X_4 is an amino acid, except of C,
X_5 is an amino acid, except of C,
X_6 is an amino acid, except of C,
and wherein $X_1X_2X_3X_4X_5X_6$ is not DAEFRH, said compound having a binding capacity to an antibody being specific for the natural N-terminal Aß42 sequence DAEFRH, and 5-mers thereof having a binding capacity to said antibody being specific for the natural N-terminal Aß42 sequence DAEFRH, for the preparation of a vaccine for Alzheimer's disease (AD).

2. Use according to claim 1 characterised in that said compound comprises or is consisting of a peptide, wherein
X_1 is G or an amino acid with a hydroxy group or a negatively charged amino acid, preferably E, Y, S or D,
X_2 is a hydrophobic amino acid or a positively charged amino acid, preferably I, L, V, K, W, R, Y, F or A,
X_3 is a negatively charged amino acid, preferably D or E,
X_4 is an aromatic amino acid or L, preferably Y, F or L,
X_5 is H, K, Y, F or R, preferably H, F or R, and
X_6 is S, T, N, Q, D, E, R, I, K, Y, or G, preferably T, N, D, R, I or G,
especially EIDYHR, ELDYHR, EVDYHR, DIDYHR, DLDYHR, DVDYHR, DIDYRR, DLDYRR, DVDYRR, DKELRI, DWELRI, YREFFI, YREFRI, YAEFRG, EAEFRG, DYEFRG, ELEFRG, DRELRI, DKELKI, DRELKI, GREFRN, EYEFRG, DWEFRDA, SWEFRT, DKELR or SFEFRG.

3. Use according to claim 1 or 2 characterised in that the compound is a polypeptide comprising 5 to 15 amino acid residues.

4. Use according to any one of claims 1 to 3 characterised is that the compound is coupled to a pharmaceutically acceptable

carrier, preferably KLH, and optionally aluminium hydroxide.

5. Use according to any one of claims 1 to 4 characterised in that it contains the compound in an amount of 0,1 ng to 10 mg, preferably 10 ng to 1 mg, especially 100 ng to 100 µg.

6. Method for isolating a compound binding to an antibody being specific for the natural N-terminal Aß42 sequence DAEFRH comprising the steps of

- providing a peptide compound library comprising peptides containing the following amino acid sequence

$$X_1X_2X_3X_4X_5X_6,$$

wherein X_1 is an amino acid, except of C,
X_2 is an amino acid, except of C,
X_3 is an amino acid, except of C,
X_4 is an amino acid, except of C,
X_5 is an amino acid, except of C,
X_6 is an amino acid, except of C,
and wherein $X_1X_2X_3X_4X_5X_6$ is not DAEFRH,

- contacting said peptide library with said antibody and
- isolating those members of the peptide library which bind to said antibody.

7. Method according to claim 6, characterised in that said peptides are provided in individualised form in said library, especially immobilised on a solid surface.

8. Method according to claim 6 or 7, characterised in that said antibody comprises a suitable marker which allows its detection or isolation when bound to a peptide of the library.

9. Vaccine against Alzheimer's Disease comprising an antigen which includes at least one peptide selected from the group EIDYHR, ELDYHR, EVDYHR, DIDYHR, DLDYHR, DVDYHR, DIDYRR, DLDYRR, DVDYRR, DKELRI, DWELRI, YREFRI, YAEFRG, EAEFRG, DYEFRG, ELEFRG, DRELRI, DKELKI, DRELKI, GREFRN, EYEFRG, DWEFRDA, SWEFRT, DKELR or SFEFRG.